

Dependability Programs

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Three speakers presented information about national and international programmatic support for research in dependability, via their respective agencies:

- National Science Foundation (NSF)
 - > Carl Landwehr
 - Defense Adv. Research Projects Agency (DARPA)
 - > Jay Lala
 - European Commission (EC)
 - > Andrea Servida (represented by Jean-Claude Laprie)
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Summary of Programmatic Challenges for Dependability

- Dependable COTS (NSF)
 - Self-healing systems (DARPA)
 - Public awareness of political and ethical issues (EC)
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Dependability Programs: Challenge One

BUILD DEPENDABLE COTS

- Goals
 - > Low overhead/resources, broad availability
 - > Dependable systems from (undependable) COTS
 - Supporting arguments / rationales
 - > Large-scale cost, repeatability, assurance
 - Anticipated outcomes
 - > Low-cost, commodity-level dependable systems
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Dependability Programs: Challenge Two

SELF-HEALING SYSTEMS

- Goals
 - > Swift, accurate accommodation of injurious events
 - Supporting arguments/rationales
 - > Scale, complexity, & time constraints are outstripping non-automated means
 - Anticipated outcomes
 - > Substantially higher level of system autonomy/dependability, achieved more quickly
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Dependability Programs: Challenge Three

PUBLIC AWARENESS of POLITICAL and ETHICAL ISSUES

- Goals
 - > Foster awareness; create grass-roots demand
 - > Create publicly accessible metrics (e.g., 1/100 km)
 - Supporting arguments/rationales
 - > Policies/technologies should reflect public attitudes
 - Anticipated outcomes
 - > Increased demand & support for dependability
 - > Involvement of public in issues that affect them
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